

QG series

QG40N-series

QG40N-KDXYh-080-ASN-CM-UL

Tilt switch

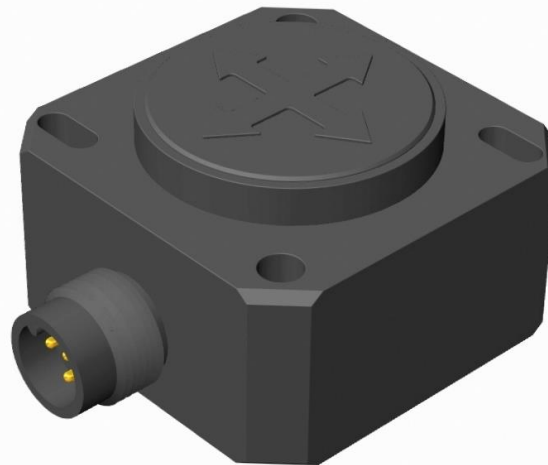
2 axis horizontal mounting

Programmable device

Output: NPN

Switch points programmable
between $\pm 1^\circ$ and $\pm 80^\circ$

Measuring range
Factory defaults: $\pm 80^\circ$



General specifications 11748B, v20241216

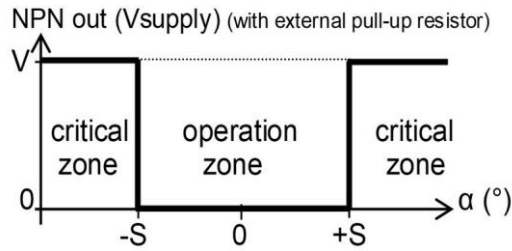
Housing	Plastic injection molded housing (Arnite T06 202 PBT black)
Dimensions (indicative)	40x40x25 mm
Mounting	Included: 2x M3x25 mm zinc plated steel pozidrive pan head screws, self-tapping (PZ DIN 7500CZ) Mounting on flat surface only. Screw with care
Ingress Protection (IEC 60529)	IP67, IP69K (with IP69K mating connector)
Relative humidity	0 - 95% (non condensing, housing fully potted)
Weight	approx. 45 gram
Supply voltage	6 - 30 V dc
Polarity protection	Yes
Current consumption	≤ 25 mA
Operating temperature	$-40 \dots +60$ °C
Storage temperature	$-40 \dots +85$ °C
Measuring range	Factory defaults: $\pm 80^\circ$
Centering function	Yes (0°), range: $\pm 5^\circ$
Frequency response (-3dB)	0 - 0,7 Hz
Accuracy (overall @20°C)	0,3° typ. (0,5° max)
Offset error	not applicable after zeroing
Non linearity	not applicable
Sensitivity error	not applicable, Repeatability 0,2°
Resolution	0,1°
Temperature coefficient	$\pm 0,04^\circ/\text{K}$ typ.
Max mechanical shock	10.000g
Output	dual NPN
Output load	2x 500 mA continuously, Temperature protected, protected against back EMF
Short circuit protection	Yes, continuously
Boot time	< 100 ms
Programming options	by optional QG40N-configurator (switch points, delay times, filtering)

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Transfer characteristic

2 independent NPN outputs:
 - Programmable switchpoints $\pm S$ (optional QG40N Configurator)
 - Operation zone: conducting
 - Critical zone: non-conducting
 - Unpowered sensor: non-conducting

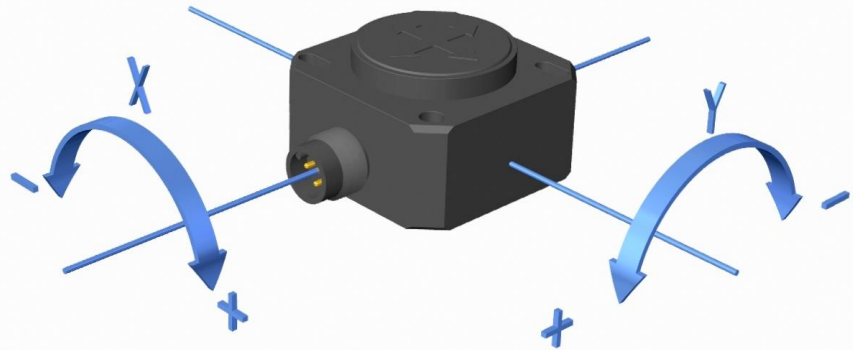
Factory defaults:
 - Switchpoint $\pm S$ output X: $\pm 80^\circ$
 - Switchpoint $\pm S$ output Y: $\pm 80^\circ$
 - hysteresis: $0,5^\circ$
 - operation ► critical delay : 0,5 s
 - critical ► operation delay : 1 s



The default 0° position is when the sensor is mounted horizontally (round nose upwards) and no acceleration is applied.

Only one axis may exceed 45° tilt. Zeroing: eliminate mech. offsets Connect zeroing input to ground ($>0,5\text{sec}$) within 1 min. after power up. Normally the zeroing input should be left unconnected. Zeroing is possible within $\pm 5^\circ$ tilt.

Measurement orientation



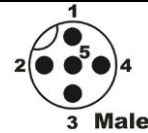
Connectivity (cable length $\pm 10\%$)

Connection

M12 5p male connector (Glass fibre reinforced grade, contacts CuZn pre-nickeled galv. Au)

Wire / pin coding

Pin 1: + Supply Voltage
 Pin 2: output Y
 Pin 3: Gnd
 Pin 4: output X
 Pin 5: zeroing



If connected with M12 F (accessory sold by DIS):

Brown: + Supply Voltage
 White: output Y
 Blue: Gnd
 Black: output X
 Green/yellow: zeroing

